#5

SEQUENCE LISTING

<110> Kapulnik, Yoram
Ginzberg, Idit

<120> METHOD FOR SELECTIVE AND OPTIONALLY REVERSIBLE DEGENERATION OF SOMATIC PLANT TISSUE

<130> 01/21632

<140> US 09/762,243
<141> 1999-07-30

<160> 24

<170> PatentIn version 3.1

<210> 1
<211> 563
<212> DNA
<213> Artificial sequence

<220>
<223> 'sps'-streptavidin artificial gene

<400> 1
actgcagtta tgcgcaagat cgtcgttgca gccatcgccg tttccctgac cacggtctcg 60

attacggcca gcgcttcggc agacccctcc aaggactcga aggcccaggt ctcggccgcc 120

gaggccggca tcaccggcac ctggtacaac cagctcggct cgaccttcat cgtgaccgcg 180

ggcgccgacg gcgccctgac cggaacctac gagtcggccg tcggcaacgc cgagagccgc 240

tacgtcctga ccggtcgtta cgacagcgcc ccggccaccg acggcagcgg caccgccctc 300

ggttggacgg tggcctggaa gaataactac cgcaacgccc actccgcgac cacgtggagc 360

ggccagtacg tcggcggcgc cgaggcgagg atcaacaccc agtggctgct gacctccggc 420

accaccgagg ccaacgcctg gaagtccacg ctggtcggcc acgacacctt caccaaggtg 480

aagccgtccg ccgcctccat cgacgcggcg aagaaggccg gcgtcaacaa cggcaacccg 540

ctcgacgccg ttcagcagta gtc 563

<210> 2
<211> 186
<212> PRT
<213> Artificial sequence

<220>
<223> 'sps'-streptavidin artificial gene product

<400> 2

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Thr Ala Val Met Arg Lys Ile Val Val Ala Ala Ile Ala Val Ser Leu
1               5                  10                  15

Thr Thr Val Ser Ile Thr Ala Ser Ala Ser Ala Asp Pro Ser Lys Asp
            20                  25                  30

Ser Lys Ala Gln Val Ser Ala Ala Glu Ala Gly Ile Thr Gly Thr Trp
        35                  40                  45

Tyr Asn Gln Leu Gly Ser Thr Phe Ile Val Thr Ala Gly Ala Asp Gly
    50                  55                  60

Ala Leu Thr Gly Thr Tyr Glu Ser Ala Val Gly Asn Ala Glu Ser Arg
65                  70                  75                  80

Tyr Val Leu Thr Gly Arg Tyr Asp Ser Ala Pro Ala Thr Asp Gly Ser
                85                  90                  95

Gly Thr Ala Leu Gly Trp Thr Val Ala Trp Lys Asn Asn Tyr Arg Asn
            100                 105                 110

Ala His Ser Ala Thr Thr Trp Ser Gly Gln Tyr Val Gly Gly Ala Glu
        115                 120                 125

Ala Arg Ile Asn Thr Gln Trp Leu Leu Thr Ser Gly Thr Thr Glu Ala
    130                 135                 140

Asn Ala Trp Lys Ser Thr Leu Val Gly His Asp Thr Phe Thr Lys Val
145                 150                 155                 160

Lys Pro Ser Ala Ala Ser Ile Asp Ala Ala Lys Lys Ala Gly Val Asn
                165                 170                 175

Asn Gly Asn Pro Leu Asp Ala Val Gln Gln
            180                 185
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<210> 3
<211> 564
<212> DNA
<213> Artificial sequence

<220>
<223> 'mst'-streptavidin artificial gene

<400> 3

gtaaacaatg gctcgcaaga tcgtcgttgc agccatcgcc gtttccctga ccacggtctc 60

gattacggcc agcgcttcgg cagacccctc caaggactcg aaggcccagg tctcggccgc 120

cgaggccggc atcaccggca cctggtacaa ccagctcggc tcgaccttca tcgtgaccgc 180

gggcgccgac ggcgccctga ccggaaccta cgagtcggcc gtcggcaacg ccgagagccg 240

ctacgtcctg accggtcgtt acgacagcgc cccggccacc gacggcagcg gcaccgccct 300

cggttggacg gtggcctgga agaataacta ccgcaacgcc cactccgcga ccacgtggag 360

cggccagtac gtcggcggcg ccgaggcgag gatcaacacc cagtggctgc tgacctccgg 420

caccaccgag gccaacgcct ggaagtccac gctggtcggc cacgacacct tcaccaaggt 480

gaagccgtcc gccgcctcca tcgacgcggc gaagaaggcc ggcgtcaaca acggcaaccc 540

gctcgacgcc gttcagcagt agtc 564

<210> 4
<211> 184
<212> PRT
<213> Artificial sequence

<220>
<223> 'mst'-streptavidin artificial gene product

<400> 4

Met Ala Arg Lys Ile Val Val Ala Ala Ile Ala Val Ser Leu Thr Thr
1 5 10 15

Val Ser Ile Thr Ala Ser Ala Ser Ala Asp Pro Ser Lys Asp Ser Lys
20 25 30

Ala Gln Val Ser Ala Ala Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn
35 40 45

Gln Leu Gly Ser Thr Phe Ile Val Thr Ala Gly Ala Asp Gly Ala Leu
50 55 60

Thr Gly Thr Tyr Glu Ser Ala Val Gly Asn Ala Glu Ser Arg Tyr Val
65 70 75 80

Leu Thr Gly Arg Tyr Asp Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr
85 90 95

Ala Leu Gly Trp Thr Val Ala Trp Lys Asn Asn Tyr Arg Asn Ala His
100 105 110

Ser Ala Thr Thr Trp Ser Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg
115 120 125

Ile Asn Thr Gln Trp Leu Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala
130 135 140

Trp Lys Ser Thr Leu Val Gly His Asp Thr Phe Thr Lys Val Lys Pro
145 150 155 160

Ser Ala Ala Ser Ile Asp Ala Ala Lys Lys Ala Gly Val Asn Asn Gly
165 170 175

Asn Pro Leu Asp Ala Val Gln Gln
180

<210> 5
<211> 492
<212> DNA
<213> Artificial sequence

<220>
<223> 'prost'- streptavidin artificial gene

<400> 5
gactgcagtt gacccctcca aggactcgaa ggcccaggtc tcggccgccg aggccggcat 60

caccggcacc tggtacaacc agctcggctc gaccttcatc gtgaccgcgg gcgccgacgg 120

cgccctgacc ggaacctacg agtcggccgt cggcaacgcc gagagccgct acgtcctgac 180

cggtcgttac gacagcgccc cggccaccga cggcagcggc accgccctcg gttggacggt 240

ggcctggaag aataactacc gcaacgccca ctccgcgacc acgtggagcg gccagtacgt 300

cggcggcgcc gaggcgagga tcaacaccca gtggctgctg acctccggca ccaccgaggc 360

caacgcctgg aagtccacgc tggtcggcca cgacaccttc accaaggtga agccgtccgc 420

cgcctccatc gacgcggcga agaaggccgg cgtcaacaac ggcaacccgc tcgacgccgt 480

tcagcagtag tc 492

<210> 6
<211> 162
<212> PRT
<213> Artificial sequence

<220>
<223> 'prost'- streptavidin artificial gene product

<400> 6

Thr Ala Val Asp Pro Ser Lys Asp Ser Lys Ala Gln Val Ser Ala Ala
1 5 10 15

Glu Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
20 25 30

Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser
35 40 45

Ala Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
50 55 60

Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
65 70 75 80

Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
85 90 95

Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
100 105 110

Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
115 120 125

Gly His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser Ile Asp
130 135 140

Ala Ala Lys Lys Ala Gly Val Asn Asn Gly Asn Pro Leu Asp Ala Val
145 150 155 160

Gln Gln

<210> 7
<211> 495
<212> DNA
<213> Artificial sequence

<220>
<223> 'mprost'- streptavidin artificial gene

<400> 7
gtaaacaatg gctgacccct ccaaggactc gaaggcccag gtctcggccg ccgaggccgg 60

catcaccggc acctggtaca accagctcgg ctcgaccttc atcgtgaccg cgggcgccga 120

cggcgccctg accggaacct acgagtcggc cgtcggcaac gccgagagcc gctacgtcct 180

gaccggtcgt tacgacagcg ccccggccac cgacggcagc ggcaccgccc tcggttggac 240

ggtggcctgg aagaataact accgcaacgc ccactccgcg accacgtgga gcggccagta 300

cgtcggcggc gccgaggcga ggatcaacac ccagtggctg ctgacctccg gcaccaccga 360

ggccaacgcc tggaagtcca cgctggtcgg ccacgacacc ttcaccaagg tgaagccgtc 420

cgccgcctcc atcgacgcgg cgaagaaggc cggcgtcaac aacggcaacc cgctcgacgc 480

cgttcagcag tagtc 495

<210> 8
<211> 161
<212> PRT
<213> Artificial sequence

<220>
<223> 'mprost'- streptavidin artificial gene product

<400> 8

Met Ala Asp Pro Ser Lys Asp Ser Lys Ala Gln Val Ser Ala Ala Glu
1 5 10 15

Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe Ile
20 25 30

Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser Ala
35 40 45

Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp Ser
50 55 60

Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val Ala
65 70 75 80

Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser Gly
85 90 95

Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu Leu
100 105 110

Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val Gly

115 120 125

His Asp Thr Phe Thr Lys Val Lys Pro Ser Ala Ala Ser Ile Asp Ala
130 135 140

Ala Lys Lys Ala Gly Val Asn Asn Gly Asn Pro Leu Asp Ala Val Gln
145 150 155 160

Gln

<210> 9
<211> 369
<212> DNA
<213> Artificial sequence

<220>
<223> 'cst'- streptavidin artificial gene

<400> 9
actgcaggca tcaccggcac ctggtacaac cagctcggct cgaccttcat cgtgaccgcg 60

ggcgccgacg gcgccctgac cggaacctac gagtcggccg tcggcaacgc cgagagccgc 120

tacgtcctga ccggtcgtta cgacagcgcc ccggccaccg acggcagcgg caccgccctc 180

ggttggacgg tggcctggaa gaataactac cgcaacgccc actccgcgac cacgtggagc 240

ggccagtacg tcggcggcgc cgaggcgagg atcaacaccc agtggctgct gacctccggc 300

accaccgagg ccaacgcctg gaagtccacg ctggtcggcc acgacacctt caccaaggtg 360

aagccgtag 369

<210> 10
<211> 122
<212> PRT
<213> Artificial sequence

<220>
<223> 'cst'- streptavidin artificial gene product

<400> 10

Thr Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
1 5 10 15

Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser
20 25 30

Ala Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
35 40 45

Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
50 55 60

Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
65 70 75 80

Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
85 90 95

Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
100 105 110

Gly His Asp Thr Phe Thr Lys Val Lys Pro
115 120

<210> 11
<211> 376
<212> DNA
<213> Artificial sequence

<220>
<223> 'cyto' - streptavidin artificial gene

<400> 11
gtaaacaatg gctggcatca ccggcacctg gtacaaccag ctcggctcga ccttcatcgt 60

gaccgcgggc gccgacggcg ccctgaccgg aacctacgag tcggccgtcg gcaacgccga 120

gagccgctac gtcctgaccg gtcgttacga cagcgccccg gccaccgacg gcagcggcac 180

cgccctcggt tggacggtgg cctggaagaa taactaccgc aacgcccact ccgcgaccac 240

gtggagcggc cagtacgtcg gcggcgccga ggcgaggatc aacacccagt ggctgctgac 300

ctccggcacc accgaggcca acgcctggaa gtccacgctg gtcggccacg acaccttcac 360

caaggtgaag ccgtag 376

<210> 12
<211> 122
<212> PRT
<213> Artificial sequence

<220>
<223> 'cyto' - streptavidin artificial gene product

<400> 12

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Met Ala Gly Ile Thr Gly Thr Trp Tyr Asn Gln Leu Gly Ser Thr Phe
1               5                   10                  15

Ile Val Thr Ala Gly Ala Asp Gly Ala Leu Thr Gly Thr Tyr Glu Ser
            20                  25                  30

Ala Val Gly Asn Ala Glu Ser Arg Tyr Val Leu Thr Gly Arg Tyr Asp
        35                  40                  45

Ser Ala Pro Ala Thr Asp Gly Ser Gly Thr Ala Leu Gly Trp Thr Val
    50                  55                  60

Ala Trp Lys Asn Asn Tyr Arg Asn Ala His Ser Ala Thr Thr Trp Ser
65                  70                  75                  80

Gly Gln Tyr Val Gly Gly Ala Glu Ala Arg Ile Asn Thr Gln Trp Leu
                85                  90                  95

Leu Thr Ser Gly Thr Thr Glu Ala Asn Ala Trp Lys Ser Thr Leu Val
            100                 105                 110

Gly His Asp Thr Phe Thr Lys Val Lys Pro
        115                 120
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<210> 13
<211> 63
<212> DNA
<213> Triticum aestivum

<400> 13
atgaagacct ttctcatcct tgtcctcctt gctattgtgg cgaccaccgc cacaactgca 60

gtt 63

<210> 14
<211> 20
<212> PRT
<213> Triticum aestivum

<400> 14

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Met Lys Thr Phe Leu Ile Leu Val Leu Leu Ala Ile Val Ala Thr Thr
1               5                   10                  15

Ala Thr Thr Ala
            20
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<210> 15
<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 15
actgcagtta tgcgcaagat cgtcg 25

<210> 16
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 16
gactactgct gaacggcg 18

<210> 17
<211> 32
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 17
gtaaacaatg gctcgcaaga tcgtcgttgc ag 32

<210> 18
<211> 37
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 18
gactgcagtt gacccctcca aggactcgaa ggcccag 37

<210> 19
<211> 40
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 19
gtaaacaatg gctgacccct ccaaggactc gaaggcccag 40

<210> 20
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 20
actgcaggca tcaccggcac ctggtacaac 30

<210> 21
<211> 22
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 21
ctacggcttc accttggtga ag 22

<210> 22
<211> 37
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 22
gtaaacaatg gctggcatca ccggcacctg gtacaac 37

<210> 23
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 23
cacgcaggtt ctccggccgc 20

<210> 24
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 24
tgcgctgcga atcgggagcg 20